

RECEIVED

JUL 17 2001

TECH CENTER 1600/2900



SEQUENCE LISTING

<110> Sattcioglu, Fahri

<120> Differentially Expressed Genes in
Prostate Cancer

<130> 50218/002003

<140> US 09/743,682

<141> 2001-01-10

<150> PCT/IB00/00673

<151> 2000-05-19

<150> US 60/135,325

<151> 1999-05-20

<150> US 60/135,333

<151> 1999-05-20

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 618

<212> DNA

<213> Homo sapiens

<400> 1

atggaaaacg aattgttctg ctggggcggtc ctgggtgcattc cgccagggtt gctgtcagcc 60
gcacactgtt tccagaactc ctacaccatc gggctggggcc tgcacagtct tgaggccgac 120
caagagccag ggagccagat ggtggaggcc agcctctccg tacggcaccc agagtacaac 180
agacccttgc tcgctaaccga cctcatgctc atcaagttgg acgaatccgt gtccgagtct 240
gacaccatcc ggagcatcag cattgcttcg cagtgcccta ccgcggggaa ctcttgccctc 300
gtttctggct ggggtctgct ggcgaacggc agaatgccta ccgtgctgca gtgcgtgaac 360
gtgtcggtgg tgtctgagga ggtctgcagt aagctctatg acccgctgtta ccaccccagc 420
atgttctgcg ccggcggagg gcaagaccag aaggactcct gcaacgggtga ctctgggggg 480
ccacctgatct gcaacgggtta cttgcaggggc cttgtgtctt tcggaaaagc cccgtgtggc 540
caagttggcg tgccaggtgt ctacaccaac ctctgcaaatt tcactgagtg gatagagaaa 600
accgtccagg ccagttaa 618

<210> 2

<211> 481

<212> DNA

<213> Homo sapiens

<400> 2

atggaaaacg aattgttctg ctggggcggtc ctgggtgcattc cgccagggtt gctgtcagcc 60
gcacactgtt tccagaactc ctacaccatc gggctggggcc tgcacagtct tgaggccgac 120
caagagccag ggagccagat ggtggaggcc agcctctccg tacggcaccc agagtacaac 180
agacccttgc tcgctaaccga cctcatgctc atcaagttgg acgaatccgt gtccgagtct 240
gacaccatcc ggagcatcag cattgcttcg cagtgcccta ccgcggggaa ctcttgccctc 300
gtttctggct ggggtctgct ggcgaacggc tgactctggg gggccccctga tctgcaacgg 360
gtacttgcag ggccttgtgt ctttcggaaa agccccgtgt ggccaagttg gcgtgcccagg 420
tgtctacacc aacctctgca aattcaactga gtggatagtag aaaaaccgtcc aggccagtt 480

<210> 3
<211> 702
<212> DNA
<213> Homo sapiens

<400> 3
atggaaaacg aattgttctg ctcggcggtc ctgggtcatc cgcaagtgggt gctgtcagcc 60
gcacactgtt tccagaactc ctacaccatc gggctggcc tgcacagtct tgaggccgac 120
caagagccag ggagccagat ggtggaggcc agcctctccg tacggcaccc agagtacaac 180
agacccttgc tcgctaaccga cctcatgctc atcaagttgg acgaatccgt gtccgagtct 240
gacaccatcc ggagcatcag cattgcttcg cagtgcccta ccgcgggaa ctcttgccctc 300
gtttctggct ggggtctgct ggcgaacggg gagctcacgg gtgtgtgtct gccctcttca 360
aggaggtcct ctgcccagtc gcgggggctg acccagagct ctgcgtccca ggcagaatgc 420
ctaccgtgct gcagtgcgtg aacgtgtcgg tggtgtctga ggaggtctgc agtaagctct 480
atgaccggct gtaccaccccc agcatgttct gcgcggcgg aggccaagac cagaaggact 540
cctgcaacgg tgactctggg gggccctga tctgcaacgg gtacttgcag ggccttgtgt 600
ctttcggaaa agcccccgtgt tggccaagtt ggcgtgccag gtgtctacac caacctctgc 660
aaattcactg agtggataga gaaaaccgtc caggccagtt aa 702

<210> 4
<211> 834
<212> DNA
<213> Homo sapiens

<400> 4
ggaatgagcc tggatccggg gagcccagag ggaaggggctg ggaggcggga atcttgcttc 60
ggaaggactc agagagtctt gacttgaat ctcagccca gtcgtgatct ctatgtaaact 120
aagctcctac accatcgggc tggccctgca cagtttgcg gccgaccaag agccaggag 180
ccagatggtg gaggccagcc tctccgtacg gcaccaggag tacaacagac ctttgctcgc 240
taacgacctc atgctcatca agttggacga atccgtgtcc gagttctgaca ccattccggag 300
catcagcatt gcttcgcagt gccctaccgc ggggaactct tgcctcggtt ctggctgggg 360
tctgctggcg aacgggtgaaac tcacgggtt gtgtctgccc tcttcaaggaa ggtcctctgc 420
ccagtcgcgg gggctgaccc agagctctgc gtcccaggca gaatgcctac cgtgctgcag 480
tgcgtgaacg tgcgtgtgtt gtctgaggag gtctgcagta agctctatga cccgcgttac 540
caccggcagca tggatccggc cggcgggggg caagaccaga aggactccgt caacgggtgac 600
tctggggggc ccctgatctg caacgggtac ttgcaggggcc ttgtgtctt cgaaaaagcc 660
ccgtgtggcc aagttggcgt gccagggttc tacaccaacc tctgcaaatt cactgagtgg 720
atacgtggaaa ccgtccaggc cagtttaccc tggggactgg gaaccatgaa aattgacccc 780
caaatacatac tgcggaaagg aattcaggaa tatctgatcc cagccctcc tccc 834

<210> 5
<211> 440
<212> DNA
<213> Homo sapiens

<400> 5
ggaatgagcc tggatccggg gagcccagag ggaaggggctg ggaggcggga atcttgcttc 60
ggaaggactc agagagccct gacttgaat ctcagccca gtcgtgatct ctatgtaaact 120
aagctcctac accatcgggc tggccctgca cagtttgcg gccgaccaag agccaggag 180
ccagatggtg gaggccagcc tctccgtacg gcaccaggag tacaacagac ctttgctcgc 240
taacgacctc atgctcatca agttggacga atccgtgtcc gagttctgaca ccattccggag 300
catcagcatt gcttcgcagt gccctaccgc ggggaactct tgcctcggtt ctggctgggg 360
tctgctggcg aacggcagaa tgcctaccgt gtcgcagtgc gtgaacgtgtt cggtgggtgc 420
tgaggagggtc tgcagtaagc 440

<210> 6

<211> 457
<212> DNA
<213> Homo sapiens

<400> 6
ggctctggga ggaggacgga atgagcctgg atccggggag cccagaggga agggctggga 60
ggcgggaaatc ttgcttcgga aggactcaga gagccctgac ttgaaatctc agcccagtgc 120
ttagtctcta gtgaactaag ctccctacacc atcgggctgg gcctgcacag tcttgaggcc 180
gaccaagagc cagggagcca gatggtggag gccagcctct ccgtacggca cccagagtac 240
aacagaccct tgctcgctaa cgacctcatg ctcatcaagt tggacgaatc cgtgtccgag 300
tctgacacca tccggagcat cagcattgct tcgcagtgcc ctaccgcggg gaactcttgc 360
ctcgttctg gctggggct gctggcgaac ggcagaatgc ctaccgtgct gcagtgcgtg 420
aacgtgtcgg tggtgtctga ggaggtctgc agtaagc 457

<210> 7
<211> 636
<212> DNA
<213> Homo sapiens

<400> 7
accacccag catgttctgc gccggcggag agcaagacca gaaggactcc tgcaacgtga 60
gagagggaa aggggagggc aggcgactca gggaaagggtg gagaaggggg agacagagac 120
acacaggggcc gcatggcgag atgcagagat ggagagacac acagggagac agtgcacaact 180
agagagagaa actgagagaa acagggaaat aaacacagga ataaagagaa gcaaaggaag 240
agagaaaacag aaacagacat gggggaggca gaaacacaca cacatagaaa tgcagctgac 300
cttccaacag catggggcct gagggcgggt acctccaccc aacagaaaat cctcttataa 360
ctttgactc cccaaaaaac ctgactagaa atagctact gttgacgggg gagccttacc 420
aataacataa atagtcgatt tatgcatacg ttttatgcat tcatgatata ccttgttgg 480
aatttttga tatttctaag ctacacagtt cgtctgtgaa tttttttaaa ttgttgcaac 540
tctcttaaaa tttttctaa tttgtttatt gaaaaaaaaatc caagtataag tggacttgc 600
cagttcaaac cagggtgtt caagggtcaa ctgtgt 636

<210> 8
<211> 205
<212> PRT
<213> Homo sapiens

<400> 8
Met Glu Asn Glu Leu Phe Cys Ser Gly Val Leu Val His Pro Gln Trp
1 5 10 15
Val Leu Ser Ala Ala His Cys Phe Gln Asn Ser Tyr Thr Ile Gly Leu
20 25 30
Gly Leu His Ser Leu Glu Ala Asp Gln Glu Pro Gly Ser Gln Met Val
35 40 45
Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro Leu Leu
50 55 60
Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser Glu Ser
65 70 75 80
Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr Ala Gly
85 90 95
Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly Arg Met
100 105 110
Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu Glu Val
115 120 125
Cys Ser Lys Leu Tyr Asp Pro Leu Tyr His Pro Ser Met Phe Cys Ala
130 135 140
Gly Gly Gly Gln Asp Gln Lys Asp Ser Cys Asn Gly Asp Ser Gly Gly
145 150 155 160

Pro	Leu	Ile	Cys	Asn	Gly	Tyr	Leu	Gln	Gly	Leu	Val	Ser	Phe	Gly	Lys
				165				170						175	
Ala	Pro	Cys	Gly	Gln	Val	Gly	Val	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys
				180				185					190		
Lys	Phe	Thr	Glu	Trp	Ile	Glu	Lys	Thr	Val	Gln	Ala	Ser			
				195				200				205			

<210> 9
<211> 110
<212> PRT
<213> Homo sapiens

<400> 9															
Met	Glu	Asn	Glu	Leu	Phe	Cys	Ser	Gly	Val	Leu	Val	His	Pro	Gln	Trp
1				5				10				15			
Val	Leu	Ser	Ala	Ala	His	Cys	Phe	Gln	Asn	Ser	Tyr	Thr	Ile	Gly	Leu
				20				25				30			
Gly	Leu	His	Ser	Leu	Glu	Ala	Asp	Gln	Glu	Pro	Gly	Ser	Gln	Met	Val
				35			40			45					
Glu	Ala	Ser	Leu	Ser	Val	Arg	His	Pro	Glu	Tyr	Asn	Arg	Pro	Leu	Leu
				50			55			60					
Ala	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asp	Glu	Ser	Val	Ser	Glu	Ser
				65			70			75			80		
Asp	Thr	Ile	Arg	Ser	Ile	Ser	Ile	Ala	Ser	Gln	Cys	Pro	Thr	Ala	Gly
					85			90			95				
Asn	Ser	Cys	Leu	Val	Ser	Gly	Trp	Gly	Leu	Leu	Ala	Asn	Gly		
				100				105			110				

<210> 10
<211> 146
<212> PRT
<213> Homo sapiens

<400> 10															
Met	Glu	Asn	Glu	Leu	Phe	Cys	Ser	Gly	Val	Leu	Val	His	Pro	Gln	Trp
1				5				10				15			
Val	Leu	Ser	Ala	Ala	His	Cys	Phe	Gln	Asn	Ser	Tyr	Thr	Ile	Gly	Leu
				20				25				30			
Gly	Leu	His	Ser	Leu	Glu	Ala	Asp	Gln	Glu	Pro	Gly	Ser	Gln	Met	Val
				35			40			45					
Glu	Ala	Ser	Leu	Ser	Val	Arg	His	Pro	Glu	Tyr	Asn	Arg	Pro	Leu	Leu
				50			55			60					
Ala	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asp	Glu	Ser	Val	Ser	Glu	Ser
				65			70			75			80		
Asp	Thr	Ile	Arg	Ser	Ile	Ser	Ile	Ala	Ser	Gln	Cys	Pro	Thr	Ala	Gly
					85			90			95				
Asn	Ser	Cys	Leu	Val	Ser	Gly	Trp	Gly	Leu	Leu	Ala	Asn	Gly	Glu	Leu
				100				105			110				
Thr	Gly	Val	Cys	Leu	Pro	Ser	Ser	Arg	Arg	Ser	Ser	Ala	Gln	Ser	Arg
				115			120			125					
Gly	Leu	Thr	Gln	Ser	Ser	Ala	Ser	Gln	Ala	Glu	Cys	Leu	Pro	Cys	Cys
				130			135			140					
Ser	Ala														
	145														

<210> 11
<211> 100
<212> PRT
<213> Homo sapiens

<400> 11
Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro
1 5 10 15
Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser
20 25 30
Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr
35 40 45
Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly
50 55 60
Glu Leu Thr Gly Val Cys Leu Pro Ser Ser Arg Arg Ser Ser Ala Gln
65 70 75 80
Ser Arg Gly Leu Thr Gln Ser Ser Ala Ser Gln Ala Glu Cys Leu Pro
85 90 95
Cys Cys Ser Ala
100

<210> 12
<211> 85
<212> PRT
<213> Homo sapiens

<400> 12
Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro
1 5 10 15
Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser
20 25 30
Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr
35 40 45
Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly
50 55 60
Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu
65 70 75 80
Glu Val Cys Ser Lys
85

<210> 13
<211> 85
<212> PRT
<213> Homo sapiens

<400> 13
Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro
1 5 10 15
Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser
20 25 30
Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr
35 40 45
Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly
50 55 60
Arg Met Pro Thr Val Leu Gln Cys Val Asn Val Ser Val Val Ser Glu
65 70 75 80

Glu Val Cys Ser Lys
85

<210> 14
<211> 129
<212> PRT
<213> Homo sapiens

<400> 14
Ala Ile Ser Ser Gln Val Phe Trp Gly Val Lys Ser Tyr Lys Arg Ile
1 5 10 15
Phe Cys Trp Val Glu Val Thr Ala Leu Arg Pro His Ala Val Gly Arg
20 25 30
Ser Ala Ala Phe Leu Cys Val Cys Val Ser Asp Met Ser Val Ser Val
35 40 45
Ser Leu Phe Leu Cys Phe Ser Leu Phe Leu Cys Leu Phe Pro Cys Phe
50 55 60
Ser Gln Phe Leu Ser Leu Val Val Thr Val Ser Leu Cys Val Ser Pro
65 70 75 80
Ser Leu His Leu Ala Met Arg Pro Cys Val Ser Leu Ser Pro Pro Ser
85 90 95
Pro Pro Phe Pro Glu Ser Pro Ala Leu Pro Phe Pro Leu Ser His Val
100 105 110
Ala Gly Val Leu Leu Val Leu Leu Ser Ala Gly Ala Glu His Ala Gly
115 120 125
Val

<210> 15
<211> 618
<212> RNA
<213> Homo sapiens

<400> 15
auggaaaacg aauuguucug cucgggcguc cuggugcauc cgccagugggu gcugucagcc 60
gcacacuguu uccagaacuc cuacaccauc gggcugggcc ugcacagucu ugaggccgac 120
caagagccag ggagccagau gguggaggcc agccucuccg uacggcaccc agaguacaac 180
agaccuuugc ucgcuaacga ccucaugcuc aucaaguugg acgaauccgu guccgagucu 240
gacaccaucc ggagcaucag cauugcuiucg cagugcccua ccgcggggaa cucuugccuc 300
guuucuggcu ggggucugcu ggcgaacggc agaaugccua ccgugcugca gugcgugaac 360
gugucggugg ugucugagga ggucugcagu aagcucuuaug acccgugcua ccaccccagc 420
auguucugcg cggcgagg gcaagaccag aaggacuccu gcaacgguga cucugggggg 480
ccccugaucu gcaacggua cuugcagggc cuugugucuu ucggaaaagc cccguguggc 540
caaguuggcg ugccaggugu cuacaccaac cucugcaaau ucacugagug gauagagaaa 600
accguccagg ccaguuaa 618

<210> 16
<211> 480
<212> RNA
<213> Homo sapiens

<400> 16
auggaaaacg aauuguucug cucgggcguc cuggugcauc cgccagugggu gcugucagcc 60
gcacacuguu uccagaacuc cuacaccauc gggcugggcc ugcacagucu ugaggccgac 120
caagagccag ggagccagau gguggaggcc agccucuccg uacggcaccc agaguacaac 180
agaccuuugc ucgcuaacga ccucaugcuc aucaaguugg acgaauccgu guccgagucu 240

gacaccaucc ggagcaucag cauugcuuucg cagugcccua ccgcggggaa cucuugccuc 300
guuucuggcu ggggucugcu ggcgaacggg ugacucuggg gggccccuga ucugcaacgg 360
guacuugcag ggccuugguc uuucggaaaa gccccgugug gccaaguugg cgugccaggu 420
gucuacacca accucugcaa auucacugag uggaugaga aaaccgucca gcccaguuaa 480

<210> 17
<211> 701
<212> RNA
<213> Homo sapiens

<400> 17
augggaaaacg aauuguuucug cucgggcguc cuggugcauc cgcagugggu gcugucagcc 60
gcacacuguu uccagaacuc cuacaccauc gggcugggcc ugcacagucu ugaggccgac 120
caagagccag ggagccagau gguggaggcc agccucuccg uacggcaccc agaguacaac 180
agacccuugc ucgcuaacga ccucagcuca ucaaguugga cgaauccgug uccgagucug 240
acaccauccg gagcaucagc auugcuucgc agugccuac cgcggggaaac ucuugccucg 300
uuucuggcug gggucugcug ggcgaacggug agcucacggg ugugugucug cccucuucaa 360
ggaggguccuc ugcccagucg cgggggcuga cccagagcuc ugcguccag gcagaaugcc 420
uaccgugcug cagugcguga acgugucggu ggugucugag gaggugcugca guaagcucua 480
ugacccgcug uaccacccca gcauguucug cgcggcgga gggcaagacc agaaggacuc 540
cugcaacggu gacucugggg gggcccugau cugcaacggg uacuugcagg gccuuguguc 600
uuucggaaaa gccccguguu ggcacaaguug gcgugccagg ugucuacaccc aaccucugca 660
aaucacuga guggauagag aaaaccgucc aggccaguua a 701

<210> 18
<211> 830
<212> RNA
<213> Homo sapiens

<400> 18
gaaaugagcc uggaucgggg gagcccagag ggaagggcug ggaggcgaaa aucuugcuuc 60
ggaaggacuc agagaguccg acuugaaauc ucagcccagu gcugagucuc uagugaacua 120
agcuccuaca ccaucgggcu gggccugcac agucuugagg ccgaccaaga gccagggagc 180
cagaggugga ggccagccuc uccguacggc accccagagua caacagaccc uugcucgcua 240
acgaccucau gcucaucaag uuggacgaauc ccguguccga gucugacacc auccggagca 300
ucagcauugc uucgcagugc ccuaccgcgg ggaacucuug ccucguuuucu ggcugggguc 360
ugcuggcgaa cgggaacuca cgggugugug ucugcccucu ucaaggaggu ccucugccca 420
gucgcggggg cugaccaga gcucugcgcuc ccaggcagaa gccuaccgug cugcagugcg 480
ugaacguguc gguggugucu gaggaggucu gcaguaagcu cauagaccc cuguaccacc 540
ccagcauguu cugcgccggc ggagggcaag accagaagga cuccugcaac ggugacucug 600
gggggccccu gaucugcaac ggguacuugc agggccuugg gcuuuucggg aaagccccgu 660
guggccaagu ugugcugccca ggugucuaca ccaaccucug caaauucacu gaguggauag 720
agaaaaaccgu ccaggccagu uaacucuggg gacugggaac ccaugaaaa gaccccaaaa 780
uacaucucugc ggaaggaaau caggaauauc ugauccccagc cccuccucc 830

<210> 19
<211> 438
<212> RNA
<213> Homo sapiens

<400> 19
gaaaugagcc uggaucgggg gagcccagag ggaagggcgg gaggcgaaa ucuugcuucg 60
gaaggacuca gagagcccug acuugaaauc ucagcccagu gcugagucuc uagugaacua 120
agcuccuaca ccacgggcug ggccugcaca gcuuugaggc cgaccaagag ccagggagcc 180
agauggugga ggccagccuc uccguacggc accccagagua caacagaccc uugcucgcua 240
acgaccucau gcucaucaag uuggacgaauc ccguguccga gucugacacc auccggagca 300
ucagcauugc uucgcagugc ccuaccgcgg ggaacucuug ccucguuuucu ggcugggguc 360

ugcuggcgaa cggcagaaug ccuaccgugc ugcagugcgu gaacgugucg guggugucug 420
aggaggucug caguaagc 438

<210> 20

<211> 455

<212> RNA

<213> Homo sapiens

<400> 20

gcucugggag gaggacggaa ugagccugga uccggggagc ccagagggaa gggcugggag 60
gcgggaaucu ugcuucggaa ggacucagag agcccugacu ugaaaucuca gcccaugucu 120
gagucucuag ugaacuaagc uccuacacca ucgggcuggg ccugcacagu cuugaggccg 180
accaagagcc agggagccag augguggagg ccagccucuc cguacggcac ccagaguaca 240
acagacccuu gcucgcuaac gaccucaugc caucaaguug gacgaaucg uguccgaguc 300
ugacaccauc cggagcauca gcauugcuiuc gcagugccu accgcgggaa acucuugccu 360
cguuucuggc uggggucugc uggcgaacgg cagaauugccu accgugcugc agugcgugaa 420
cgugucggug gugucugagg aggucugcag uaagc 455

<210> 21

<211> 635

<212> RNA

<213> Homo sapiens

<400> 21

accaccccaag cauguucugc gccggcggag agcaagacca gaaggacucc ugcaacguga 60
gagaggggaa aggggagggc aggccacuca gggaaaggug gagaaggggg agacagagac 120
acacaggggcc gcauggcgcag augcagagau ggagagacac acagggagac agugacaacu 180
agagagagaa acugagagaa acagggaaau aaacacagga auaaagagaa gcaaaggaag 240
agagaaacag aaacagacau gggggaggca gaaacacaca cacaugaaaa ugcagcugac 300
cuuccaacag cauggggcuu gagggcggug accuccaccc aacagaaaaau ccucuuauaa 360
cuuugacuc cccaaaaaac cugacuagaa auagccuacu guugacgggg gagccuuacc 420
aaauaacauaa auagucgauu uaugcauacg uuuuaugcau ucaugauaua ccuuuguugg 480
aaauuuuuga uauuucuaag cuacacaguu cgucugugaa uuuuuuuaaa uuuguugcaac 540
ucuccuaaaaa uuuuuucuaa uguguuuauu gaaaaaaaauc caaguuaagu ggacuugugc 600
aguucaaacc aggguuguuuc aaggguacaac ugugu 635